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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,063	12/02/2003	Zugen Ni	33811/US	2574

7590 06/20/2007  
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Minneapolis, MN 55402-1498

EXAMINER
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SNIDER, THERESA T

ART UNIT	PAPER NUMBER
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1744

MAIL DATE	DELIVERY MODE
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06/20/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/726,063

Applicant(s)

NI, ZUGEN

Examiner

Theresa T. Snider

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6,8 and 9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6,8 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6, 8 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Exemplary of such:

Claim 6, line 4 and claim 9, line 7, it is unclear as to what is meant by 'distance apart'.

### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen et al.(6,094,774) as in view of Stade et al.(3,381,774).

Larsen et al. discloses a similar silencer however fails to disclose the relationship of the cross-sectional area of the pores.

Larsen et al. discloses a longitudinal exhaust channel for passage of exhaust airflow (fig. 1, area defined by #11,12).

Larsen et al. discloses a plurality/two silencing board with a plurality of pores a distance apart from each other and mounted perpendicular in the exhaust channel (fig. 1,

#7,9,arrows fig. 4, #17). Stade et al. discloses the use of a silencing board with a

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plurality of pores in an exhaust channel wherein the number and size of the pores is a matter of design choice (figs. 2-3, #42, col. 3, lines 54-61). It would have been obvious to one of ordinary skill in the art to determine the most appropriate passage area of the pores of Larsen et al. to allow for the most effective noise decrease dependent on the capacity of the vacuum source and back pressure, as disclosed in Stade et al..

With respect to claim 9, Stade et al. discloses a plurality of silencing boards having a plurality of round pores (fig. 3, #40,42). It would have been obvious to one of ordinary skill in the art to provide the round pores of Stade et al. in Larsen et al. to allow for the most effective noise decrease dependent on the capacity of the vacuum source and back pressure, as disclosed in Stade et al..

With respect to claim 10, Larsen et al. discloses the boards being parallel to each other (fig. 1, #7,9).

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen et al.(6,094,774) in view of Stade et al.(3,381,774) as applied to claim 6 above, and further in view of Murty(2,882,993).

Larsen et al. in view of Stade et al. discloses a similar silencer however fails to disclose the diameter of the pores.

Murty discloses the use of a silencing board with a plurality of pores in an exhaust channel wherein the pores have a diameter less than 6 mm (fig. 2, #19a,f, col. 2, lines 59).

It would have been obvious to one of ordinary skill in the art to make the pores of Larsen

et al. in view of Stade et al. less than 6 mm to allow for the most effective noise decrease dependent on the capacity of the vacuum source and back pressure.

### ***Response to Arguments***

3. Applicant's arguments filed 4/17/2007 have been fully considered but they are not persuasive. Applicant argues Larsen et al. does not disclose a longitudinal exhaust channel. This argument is not persuasive because the area bounded by #11 and #12 define a longitudinal exhaust channel. Applicant argues Larsen et al. does not disclose a plurality(two) silencing boards disposed apart and in parallel with each and disposed perpendicular in the channel. This argument is not persuasive because Larsen et al. discloses a plurality of silencing boards that are distanced apart and in parallel with each and disposed perpendicular in the channel (fig. 1, #7,9).

Applicant argues Stade et al. does not teach use with vacuum cleaners. This argument is not persuasive because both Stade et al. and Larsen et al., are directed to achieving the same goal, that of silencing of exhaust flow. Further, it is noted that both Stade et al. and Larsen et al. disclose the use of boards having a plurality of pores as silencing devices. Therefore, both vacuum cleaners and internal combustion engines use the same technology for silencing exhaust flow. Both one of ordinary skill in the art of vacuum cleaner and one of ordinary skill in the art of internal combustion engines would need to be knowledgeable in fluid flow. It would have been obvious to one of ordinary skill in the art to determine the most appropriate passage area of the pores of Larsen et al. to allow for the most effective noise decrease dependent on the capacity of the vacuum source and back pressure, as disclosed in Stade et al..

***Conclusion***

4. This is a RCE of applicant's earlier Application No. 10/726,063. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

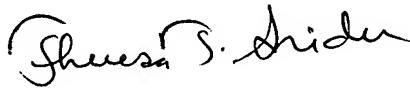
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Snider whose telephone number is (571) 272-1277. The examiner can normally be reached on Monday-Friday (5:30am-2:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Theresa T. Snider". The signature is fluid and cursive, with the first name "Theresa" being more prominent.

Theresa T. Snider  
Primary Examiner  
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6/16/07